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Belgacom: IT Project Selection 2005

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BELGACOM: IT PROJECT SELECTION 2005

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ABSTRACT

This teaching case features a situation at Belgacom, the leading telecommunications company in Belgium, end of April 2005. Wim Bouckenooghe, newly appointed finance director of Belgacom's Network and IT division within the Fixed Line Services (FLS) segment, is troubled by the effectiveness of the selection of the discretionary IT projects, particularly the larger ones. He is especially concerned about the early stages of developing ideas into project proposals and the prioritization of these proposals for selection for development into full, detailed business cases. Bouckenooghe is keen to raise his doubts and propose improvements at the next quarterly meeting of the FLS management committee in July. The teaching case is designed to enable a multifaceted class discussion on the principles, tools, and practices of IT project selection, with a special focus on the early assessment and funneling of project ideas.

KEYWORDS: IT investment management, IT project selection, IT project prioritization, IT portfolio management

I. SITUATION INTRODUCTION

On a warm spring morning toward the end of April 2005, Wim Bouckenooghe, newly appointed finance director of Belgacom's Network and IT division within the Fixed Line Services (FLS) segment, was sitting in his office high over the busy streets of Brussels contemplating his new responsibilities. Network and IT had recently merged into one division. Bouckenooghe was made responsible for controlling the allocation and usage of the FLS capital expenditure (CAPEX[1]) budget. Bouckenooghe had been appointed to his current position from within the central finance department, where he had led a team of financial analysts preparing and presenting the financial case for new projects.

[1] Capital expenditure (CAPEX) is an investment made by a company to acquire or develop property, plant, and equipment assets, usually with the expectation that it will benefit the company for a significant period of time. Both investments in software and hardware can be capital expenditure items. Operational expenditure (OPEX) in contrast is an expense incurred in conducting normal business operations. Operating expenses may include wages, salaries, administrative and research and development costs, but excludes interest, depreciation, and taxes.

Bouckenooghe was reflecting on the selection of discretionary IT projects, particularly the larger ones. Some 15 percent or €50 million of FLS CAPEX was allocated to these projects, which ranged from short-term "quick wins" with short lifetimes to infrastructure projects with expected lifetimes of more than 10 years. These investments were generally believed to have a significant impact on the organization's financial performance and its future strategic options. In an increasingly competitive marketplace it was vital that the most valuable projects were identified and supported.

Bouckenooghe was especially concerned about the early stages of developing ideas into project proposals and the prioritization of these proposals for selection for development into full, detailed business cases. Bouckenooghe's experience with the process had led him to doubt its effectiveness. Moreover, a recent tour of the company had shown Bouckenooghe that many stakeholders shared some of his concerns. For example, the head of FLS was clearly in favor of using a formal selection process, but remained concerned about the balance of rigor and timing.

> *We absolutely need a formal FLS process like the one we currently have for filtering ideas into projects that are proposed to be implemented. How else can we objectively balance our FLS investment for operational efficiencies, business continuity risk, and future business? The thing is that we have a hard time making the process both rigorous and fast at the same time. (Bridget Cosgrave, Head of FLS)*

The head of Network and IT continued to stress the need for a robust type of project selection and a consistent focus on value delivery for the company.

> *What we really need is a 'fast ideas filter' that immediately kills off bad project ideas. Instead, we all too often get lost in detailed financial cases that prove to be unstable and unreliable anyway in the early stages of idea generation. We are not yet at the level where we consistently select projects on the basis of best value for our shareholders and deliver according to the selection we made. (Philippe Ribonnet, Head of FLS Network and IT)*

Facilitating the early stages of the discretionary project selection process with the right data remained the primary challenge from the point of view of the people at FLS's Program and Processes Office (POP).

> *The difficulty in a proposal prioritization process like this is to collect the right data for each project idea in a standard way. On top of that, all these data have to be validated and challenged in a very short time frame and project proposals do not always have the same level of maturity. Now, before we had a formal FLS-level process like the one we have today there was too much room for political and power games between the FLS divisions to get to the money. (Jean-Marc Verbist, Head of FLS Program and Processes Office)*

The selection process as it stood had taken out much of the political and power games. This was generally recognized as a good thing by the FLS divisions. Still, keeping everyone happy was not easy.

> *When a project becomes too big or has an impact on more than just marketing, then we nowadays compete for the investment money at the FLS level. The challenge at this level, and it still stands, is to be able to make the case for local as well as global innovation, that is, innovation at the level of both the division as well as the segment. Moreover, a tuned selection process helps us get buy-in across the divisions as well as allows us to develop a balanced project portfolio along the different axes of our strategy.(Walter Gelens, Head of FLS Marketing)*

Now that he was responsible for controlling CAPEX, Bouckenooghe was keen to raise the doubts he had and review the selection process' effectiveness. Time was short, though, with next year's

budget allocation rapidly approaching. Bouckenooghe knew that any changes needed would have to be recommended quickly to the FLS management committee. If changes were to be implemented in time for the next run of the budgeting process, starting in October and scheduled to be finished six weeks later, they needed to be on the agenda of next quarter's meeting of the management committee.

II. BELGACOM BACKGROUND

Belgacom was the leading telecommunications company in Belgium and the national market leader in retail and wholesale fixed line services, mobile communications, broadband, and Internet services. In 2004, the company achieved an EBITDA of €2,353 million and net income of €922 million. The company operated in both infrastructure and service areas of the telecommunications industry, possessing mobile and fixed-line networks and providing services on them. The past decade had seen a great deal of change within Belgacom. The previously state-owned operator had been floated on the stock market, restructuring programs had shrunk the workforce from 26,000 to 16,000, and there had been frequent changes to the company's organizational structure.

Belgacom's FLS segment operated and controlled the company's fixed telephone line infrastructure and services. An organization chart showing the company structure is given in Exhibit 1. Alongside traditional analogue voice lines, a number of digital data services were provided within the fixed-line network infrastructure, enabled by recent technological advances. FLS provided a total of approximately 5.3 million fixed lines to customers, including almost 1 million ISDN lines and 900,000 ADSL lines.

III. IT PROJECTS

> *Telecommunications is an IT intensive industry. A strong IT portfolio is a necessary asset to succeed on the marketplace. (Bridget Cosgrave, Head of FLS)*

IT was fundamental to Belgacom's business. Belgacom's new product offerings such as ADSL and VDSL (fast Internet connections), interactive digital TV, and advanced mobile phone services such as 3G (real-time video communication) were all bolstered by advanced hardware and software developments. It was also IT that fundamentally enabled efficient and high-quality customer service, as well as allowed Belgacom to present "one face" to its customers across different channels. Regulation and legal requirements were also regularly prompting Belgacom to invest in IT. For example, network operators like Belgacom, that used to be state-owned monopolists, were forced to open up their proprietary physical network infrastructure to competing operators. This called for IT-enabled tools to track network usage to be able to charge interconnection fees.

FLS CAPEX investment per year approximated €330 million, supporting a wide range of project types and sizes (see Exhibit 2):

- Infrastructure Maintenance: The "like for like" replacement of existing IT or network infrastructure with newer equipment.
- Network Growth: The expansion of the existing network to enable a larger number of consumers to access existing products. For example, Belgacom was building out its fiber optic cable network to expand access to broadband Internet connections that were currently used by 37 percent of the Belgian population. In 2004, €83 million was invested in this and in building a VDSL platform to serve broadband users. Broadband was considered of the utmost importance to the future of Belgacom. The expansion of the broadband network was a "top-down" project, mandated by the company board and centrally monitored by Belgacom's strategy department.

- Discretionary Projects: Most FLS projects were proposed at the discretion of one of its divisions. Discretionary projects included a number of project types with a variety of aims. The ultimate aim was to help Belgacom achieve its strategic objective of being "Best in Class" through "Profitable Growth," "Operational Efficiency," and "Market Leadership."[2] Belgacom's strategic objectives are shown in Exhibit 3. Some of the discretionary projects were also initiated by regulatory requirements, such as enabling other operators to access Belgacom's physical network infrastructure.

FLS discretionary projects accounted for some 15 percent of FLS CAPEX and 41 percent of FLS IT personnel resources annually, the remaining 59 percent of IT personnel resources being devoted to "lights-on" support and maintenance operations.[3] Both CAPEX and IT development time were carefully budgeted and monitored, as they were considered, partly for historical reasons, some of the scarcest resources.

The focus on CAPEX was prompted by the telecommunications stock market downturn of 2000-2001. While the fall in share prices may have made telecom assets cheaper to acquire, it had the effect of restricting the capital available for incumbents to invest and concentrated their attention on how the limited amounts available could best be spent. In any case, capital was becoming increasingly restricted for the European telecommunications industry due to increasing competition following market deregulation.

Human IT development resources were recognized as important and limited prior to the year 2000, when significant IT time had been invested in system modifications to avert possible millennium bug problems. Formal and thorough monitoring and control of IT personnel resources and their performance was instituted at this time. The use and cost of these resources was highly visible within the company.

IV. PROJECT PROPOSAL ASSESSMENT ISSUES

> *Some project ideas are especially hard to assess early on in the assessment process. Proposals that involve the use of new technologies or that re-architect existing infrastructure are among those. (Jean-Marc Verbist, Head of FLS Program and Processes Office)*

NetMan was one of the projects that had sparked Bouckenooghe's concerns with project selection and prioritization. The NetMan project catered for the replacement of Belgacom's FLS inventory management system, a system that tracked the usage of the company's fixed line assets by its customers. A new system would help to keep track of the increasingly complex array

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[2] An important discretionary project that generated a lot of media attention, aimed at achieving market leadership, was the construction of a platform enabling the launch of Belgacom TV, the company's interactive digital television offering (broadcast and on-demand), in June 2005. The company purchased the TV broadcasting rights to the Jupiler League, the Belgian national soccer championship, to promote and generate demand for the new service. Additionally, the system offered 55 national and international channels, video on demand, and the possibility of interactive television. Construction of the platform involved seven software and hardware investments.

[3] The ratio between resources devoted to "lights-on" versus new projects is often taken to illustrate the health of a company's IT systems. The healthier the systems are the less maintenance they need and the more resources can be devoted to new, value creating investments. Benchmark data places Belgacom amongst leading companies. Accenture, the IT consulting firm, compiled data from client companies on the proportion of IT resources devoted to new projects and maintenance. Leading companies spent an average of 40% of resources on new, value creating products. See "Value discovery: a better way to prioritize IT investments" by Curtis, G. A., Meinicoff, R. M., and Mesoy, T. (Accenture Outlook, 3, 2003, pp. 43-49).

of products the company was offering. The new system aimed at providing real-time network usage, service level, and capacity information. Quality information on the network inventory was considered indispensable for operational planning, capacity management, and efficient installation and repair operations. The system had an expected life span of more than 10 years.

The NetMan project involved replacing a number of interlinked inventory systems that had grown organically over previous decades, each with interfaces into Belgacom's billing, ordering, and maintenance systems. The complexity of the existing system had caused problems in project specification. Both the technical solution and the proposed project scope had changed considerably over time. Three attempts to launch the project had been made, each with changed budget requirements and different projected benefits (Exhibit 4). The Net Present Value (NPV) of the project had trebled between the first and the most recent version of the proposal's financial case, mainly due to delays in the project, enabling an additional year of benefits to be considered in the standard, five year business case.[4]

NetMan's expected customer service benefits had proven difficult to quantify. For one, the relationship between service reliability and customer retention varied strongly between products. For some of the products it offered, Belgacom had no direct competitors, while for others the competition was intense and the potential for customers to switch to or from Belgacom higher. The large number of customer types affected by the NetMan project meant that even a slight variation in any assumption of the effect of the project on customer retention could have a massive impact on the project's financial assessment. Because of the difficulty in specifying a defensible quantification these benefits had simply been excluded from the project's projected financials.

While Bouckenooghe was clear that the high cost and complexity of the NetMan project contributed to the difficulties in assessing it, he felt that many of the problems were caused by the assessment process itself, which seemed to be unable to effectively represent the project's true value to the company.

> *While the financial value of NetMan may have changed by a factor of three between the first and last project proposal assessment rounds, the real worth of the project to the company in the long run has not. (Wim Bouckenooghe, Finance Director FLS Network and IT)*

Bouckenooghe wondered how to make a proposal's financial criteria less sensitive to cosmetic changes. Could projects with different life spans be fairly assessed by a uniform-length financial case? And more importantly, how could project proposal assessment be redesigned to ensure that the difficulties in quantifying some projects' benefits were adequately considered? All these questions were going through Bouckenooghe's mind.

V. PROJECT PRIORITIZATION AND SELECTION

> *Selecting the right IT projects for investment starts with an effective funneling of ideas into project proposals. Moreover, bad project selection can never be compensated by good project execution. (Philippe Ribonnet, Head of FLS Network and IT)*

Discretionary IT projects were prioritized and selected through one of two processes depending upon project size. The assessment of projects requiring less than €500k CAPEX and 200 IT

[4] The company believed that the pace of technological change made assessment of project value beyond a five year time horizon of limited reliability and usefulness. Also, a five year horizon was aligned with the investment horizon of many of its shareholders, and from a shareholder value perspective it was justifiable that investments were expected to perform over this timescale.

person-days development time were assessed with an informal "envelope" process. The budget for these projects was distributed to divisional heads who used it to fund what they considered to be the most valuable small and experimental projects within their domain. Projects that required more than €500k CAPEX or 200 IT person-days, or which were judged as having a "significant impact" on the company, were assessed through a formal, centralized process. In the first stage, internally abbreviated as P^3 from "Project Prioritization Process," ideas for projects were developed into formal proposals. The P^3 process was Bouckenooghe's focus of attention and concern while pondering the effectiveness of project selection and prioritization. The P^3 process is laid out in Exhibit 5.

For each project proposal assessed in the P^3 process, a project leader, commonly from the sponsoring division, worked together with a financial analyst from the central finance department to assemble the information needed to assess the project. Information was gathered from the project leader's and the financial analyst's own knowledge and from ad hoc contacts with IT or other affected parties within the company.[5] Contacts with the latter were made on a one-to-one basis via e-mail, telephone or, on some occasions, face-to-face meetings.

A standardized submission sheet, i.e., the "P^3 template," was used to collect preliminary data on the proposal's financial performance. The general classes of data used for assessing a proposal's financials are depicted in Exhibit 6. NPV, Internal Rate of Return (IRR) and Pay Back Period were calculated for each project proposal. A constant discount rate set at the company's weighted average cost of capital was used for NPV and Pay Back Period calculations. There was no standard hurdle rate for a project's IRR to exceed in order to have a good chance of approval.

Questions designed to assess the strategic value and risk of projects had recently been added to the assessment process. Strategic value and the risk attached to projects were calculated from the answers to a series of questions. See Exhibit 7 for sample questions. Bouckenooghe was doubtful, though, of the effectiveness of these criteria for project prioritization and selection.

> *While the strategic and risk assessment scores are available to the committee considering the projects for approval they are not given much weight in the approval process. The focus remains strongly on cost and NPV. (Wim Bouckenooghe, Finance Director FLS Network and IT)*

Every year, in preparation for the annual budget exercise, assessment data on all proposed and existing projects were collected and the preferences of the divisions proposing the projects were gathered. The divisions were asked to rank their proposed and existing projects in order of importance. As a result, a single list was produced for each division containing all projects irrespective of type. After preferences had been collected, the comprehensiveness of the project data was checked by FLS's POP.

POP was a supportive office with important administrative, coordination, and monitoring roles. POP, which operated across functional divisions, facilitated and managed P^3. Importantly, POP was responsible for scheduling resources and managing resource conflicts between initiatives. During P^3 conflict resolution was performed at a general level, working with total budget figures and total IT person-day capacity. Later on in project development, when project timing and scope were more certain, more detailed issues such as the availability of specific skills became more important in resource allocation and management.

Proposed and existing projects for which the assessment data were complete were dubbed "Ready for Ranking" and could pass to the next stage of the process. The next stage of the P^3 process would determine the selection of projects for which full, detailed business cases would be

[5] The IT department did not itself propose projects for approval but was asked to help formulate and validate the estimates of project cost and personnel needs.

developed. Business cases provided more reliable and detailed information than initial project proposals, and hence required more time and resources to complete. Projects failing POP's validation had to be rectified; otherwise they were removed from the process at this point.

A meeting of FLS divisional representatives, i.e., the "Project Prioritization Meeting," was presented with the list of project proposals labeled "Ready for Ranking." The meeting was again facilitated by POP. At this stage, projects expected to be started in the next year but for which even preliminary information was not available could be entered into the process if management felt they were important. These projects were termed NEW200X projects, with 200X denoting the year in question. Additionally, so-called "emergency projects" could be entered into the selection.

Divisional representatives at the meeting were presented with a list of all the proposed projects, organized initially by divisional preference. Preferences and priorities were debated by the divisional representatives, who were expected to discuss company priorities and identify the projects that best supported them. Bouckenooghe stressed the complex nature of these discussions.

> *The fact that each division proposes a number of different types of projects typically complicates the evaluation process. (Wim Bouckenooghe, Finance Director FLS Network and IT)*

The ultimate outcome of the discussion was a single list of company projects, in order of preference, and a classification of preferential projects into the following groups: TOP, TOP200X, STRONG, and STRONG200X. TOP and TOP200X projects were approved to pass on to full development of a detailed business case. These projects were said to be "Ready for Scoping." STRONG and STRONG200X projects were considered promising, but not valuable enough to justify the development of a business case at this time. STRONG projects could be entered anew into subsequent P^3 exercises. Projects not considered valuable for development were rejected at this stage. All project decisions and rationale was fed back to the proposers.

The projects passing P^3 were assessed by a second decision-making body, i.e., the "Resource Allocation Committee (RAC)," on completion of the business case. The RAC was composed of representatives of top management of the FLS divisions (Exhibit 1). The central finance department as well as the divisional finance departments were also represented on the RAC. Projects successfully passing the RAC were given the go-ahead to begin development and incurring expenditure.

Besides the P^3 exercise linked to the annual budgeting process, there was an additional P^3 exercise every three months to allow new projects to get into the selection process. In March 2005, for example, 12 new projects were entered into P^3. At any one time, approximately 50 projects had the status of having been approved in P^3. These projects were being scoped or actively implemented. They were reassessed and reprioritized in each P^3 exercise, in order to maintain visibility over the entire size and composition of the discretionary project portfolio. Accounting for the approximately 20 STRONG projects from previous P^3 exercises that were reconsidered, a total of approximately 80 projects was assessed per exercise.

VI. GOING FORWARD WITH P^3

The format of the current project development process at Belgacom was instituted in response to the recognition that only a formal, objective process could identify and approve the most valuable projects from the many ideas proposed. Despite the general satisfaction with the institution of a formal P^3 process, a number of problems had caught the attention of many a stakeholder. They were on Bouckenooghe's mind while contemplating his new job's responsibilities, and, more importantly, the upcoming run of the budgeting process for next October.

First, the quality of the information from which decisions on prioritization were made was not always deemed appropriate in P^3, particularly for new projects. Project specification and projected

results often changed between the initial proposal and final approval of the project. This meant that the projects prioritized were not always the same as those actually carried out, partially calling into question the legitimacy of the prioritization process. Bouckenooghe felt that the cause of the data quality problem could lie in the current process design. Examining this in more detail was one of his priorities.

Second, Bouckenooghe knew that the specific questions from which the strategic value and risk scores in P^3 were judged could be improved. Making changes to the template questions would be unproblematic. More difficult was determining how the information gained could then effectively be used by the participants in the process. Bouckenooghe felt that project risk and strategic value were not brought into prioritization discussions in an informed, structured way. Moreover, experience had shown that decision makers at Belgacom tended to focus their attention on the financial measures, which they viewed as being most relevant for the business.

Third, financial measures, risk and strategic value scores were presented to the decision-making body (i.e. the "Project Prioritization Meeting") separately for about 80 projects. How could multiple decision variables, with different unit scales, be used to meaningfully compare projects with different objectives? Moreover, some of the projects being compared and prioritized had greatly differing strategic objectives, and differed considerably in their size and the resources required for completing them. This made it difficult to properly compare the value of, for example, a project designed to "streamline processes" with another designed to "achieve true customer intimacy."

Any major changes needed would have to be approved by the FLS management committee. It was clear that Bouckenooghe had some thinking to do before before the management committee convened for its next quarterly meeting in July.

VII. SUGGESTED ASSIGNMENT QUESTIONS

1. What are the advantages/disadvantages of having a formal IT project selection process and a cross-departmental approach like P^3? What are the difficulties with a rigorous, cross-departmental selection?

2. Do Bouckenooghe's concerns about the current project assessment in P^3 seem to be justified? Why or why not?

3. What, if any, aspects of the project assessment in P^3 should be changed? Try to compile a list of suggested improvements, the actions necessary to correct the current situation, and the reasons underlying the suggested improvements and actions. Also, do not forget to assess the impact of any suggested changes.

4. What should Bouckenooghe tell the next meeting of the management committee?

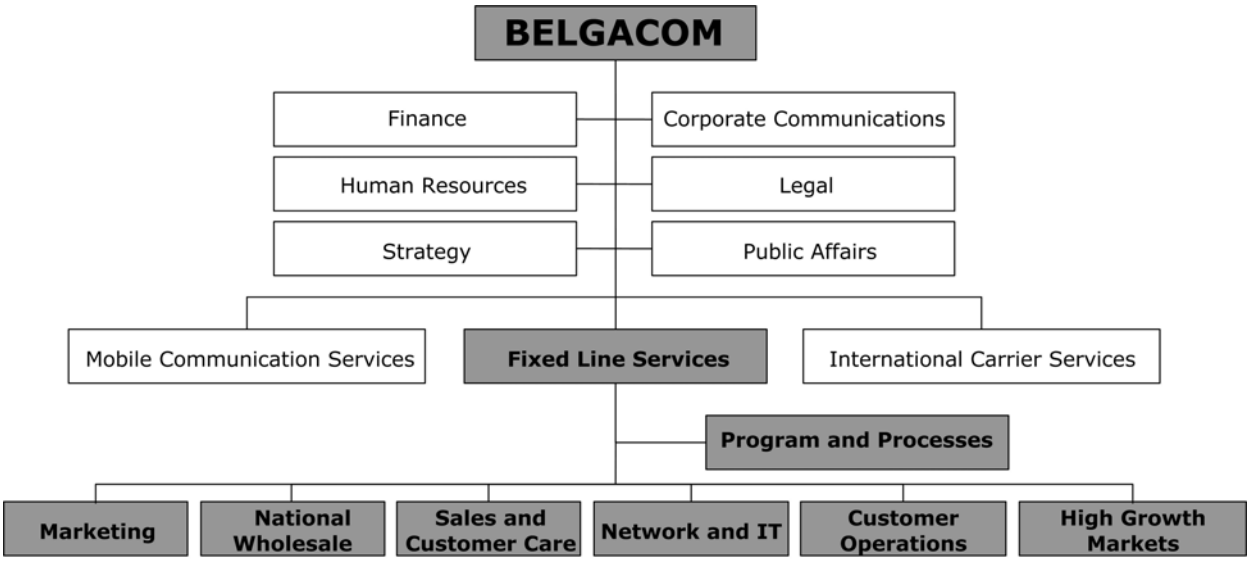
VII. ACKNOWLEDGEMENTS

We gratefully acknowledge financial support for writing this teaching case from the Intercollegiate Center for Management Science, Belgium.

ABBREVIATIONS

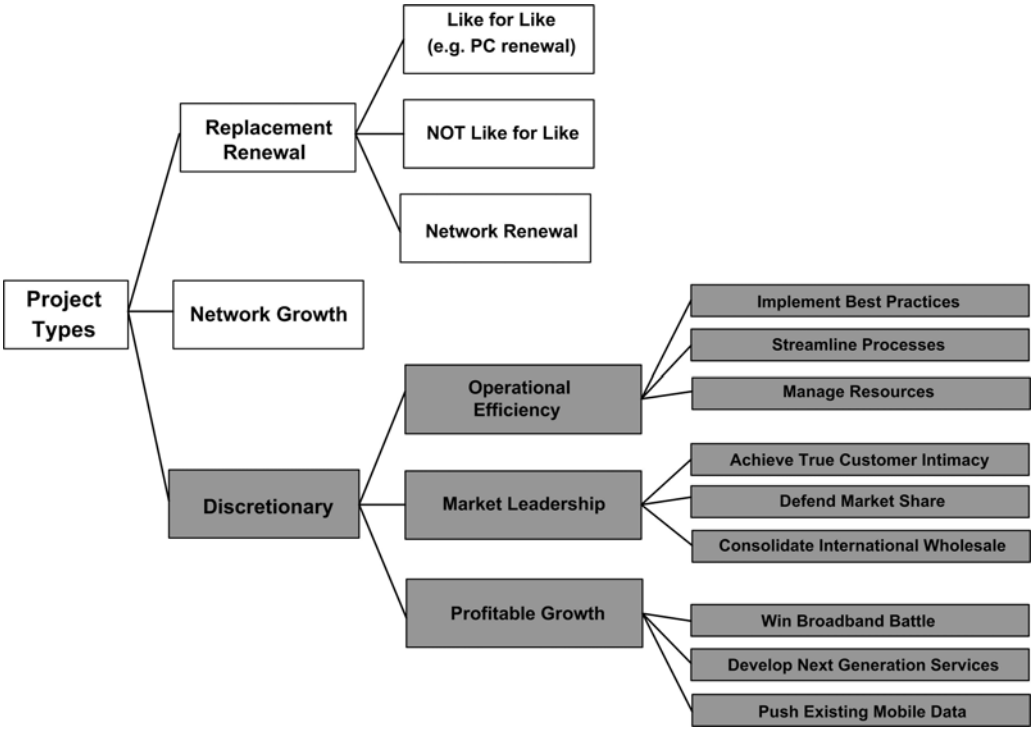
CAPEX	Capital Expenditure
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
FLS	Fixed Line Services: Belgacom's fixed line telephony segment, providing voice and data transmission infrastructure and products
IRR	Internal Rate of Return
IT	Information Technology
NPV	Net Present Value
OPEX	Operational Expenditure
POP	Program and Processes Office
P^3	Project Prioritization Process: Belgacom's project assessment process for prioritizing discretionary IT investments
RAC	Resource Allocation Committee: top management group representing FLS divisions and assessing all discretionary project proposals involving more than €500k or 200 IT person days

Exhibit 1. Belgacom‘s Division Structure



Source: Company Information

Exhibit 2. FLS Supports a Range of IT Projects



Source: Company Information

Exhibit 3. Belgacom's Strategic Objectives

Source: Company Information

Exhibit 4. NetMan Project Proposal Financial Data

	July 2004	Change	November 2004	Change	April 2005
Business Case Length (years)	5	→	5	→	5
Total CAPEX and OPEX (5 years)	€11,000k	↗ +20%	€13,200k	↘ -11%	€11,700k
NPV	€900k	↗ +198%	€2,500k	↗ 2%	€2,600k
IRR	16%	↗ +88%	30%	↗ 3%	31%
Actualized Pay Back Period	>4 Years	↘	<4 Years	→	<4 Years
Cost Avoidance Benefits (5 Years)	€10,000k	↗ +105%	€20,400k	↘ -7%	€19,100k
Cost Reduction Benefits (5 Years)	€7,500k	↘ -46%	€4,000k	↘ -6%	€3,800k

Source: Company Information

Exhibit 5. Project Prioritization Process (P^3)

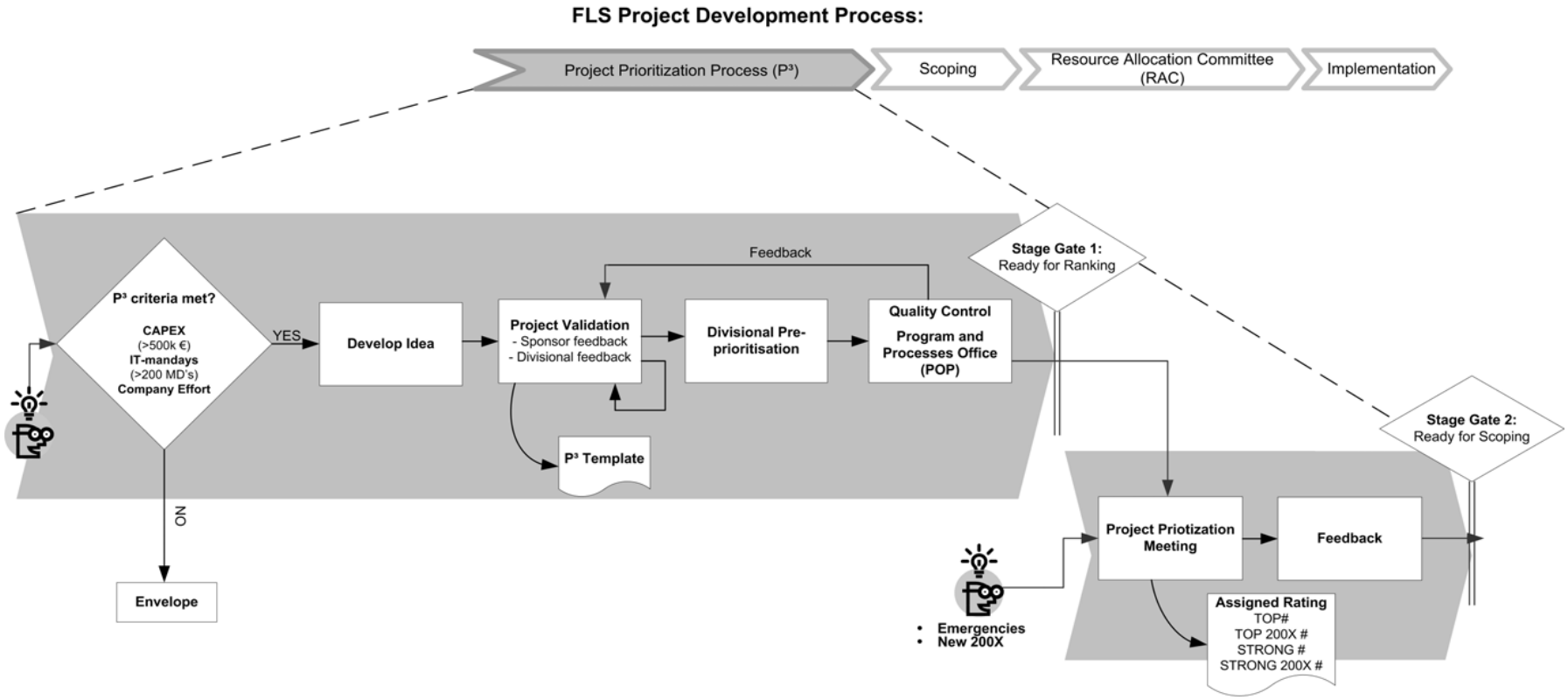


Exhibit 6. General Classes of Data Used in P³ Financial Analysis

Data Included	Data Excluded
Revenue Increase from Project	CAPEX Avoidance*
Revenue Protected	Proposal Development Costs
Cost Reduction	
Cost Avoidance	
Cost of Sales	
ITD CAPEX Development Person-Days Cost	
ITD OPEX Maintenance Person-Days Cost	
Other OPEX**	
Depreciation/Amortization	
Write-Offs	
Tax Expense	
Operating Cash Flow	
CAPEX Requested	

*Due to tax and depreciation complications

**Includes the non-IT "business" costs of projects, such as development time needed, training, and project monitoring costs

Source: Company Information

Exhibit 7. Selected Questions Used to Assess Strategic Value and Risk

Factor	Assessment Question	Evaluation Criteria
Strategic Impact: Customer Impact	Estimate the impacted customer base in a 5-year time frame. What % of customers will use or benefit from the service within 5 years from now?	Minimum of sum of % Residential customer impact, % Business customer impact and % Wholesale customer impacts, or 100%
Strategic Impact: Competitive Impact	How easy is it for the competition to match Belgacom's competitive advantage?	Unmatchable within 1 year (100%) Difficult to match within 1 year (80%) Difficult to match within 6 months (60%) Easy to match within 6 months (40%) Not applicable
	How easy is it for Belgacom to match the competitor's competitive advantage?	Need at least 1 year to match (40%) Difficult to match within 1 year (60%) Difficult to match within 6 months (80%) Easy to match within 6 months (100%) Not applicable
…	…	…

Risk: Complexity	Risk that estimated revenues or savings won't be realized	High (5) Medium(3) Low (1) None (0)
Risk: Technical	Risk of problems due to the project's inherent complexity (technical, partners, etc.)	High (5) Medium(3) Low (1) None (0)
Risk: Timing	Risk that staffing to implement the project will not be available timely	High (5) Medium(3) Low (1) None (0
…	…	…

Source: Company Information

ABOUT THE AUTHORS

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Simon Fagan has a BA degree from Oxford University, a PhD from the University of Wollongong, Australia, and an MBA from the Vlerick Leuven Gent Management School, Belgium. He specializes in strategy and operational improvement in the telecommunications sector.

Sérgio Almeida holds a degree in Electronics and Computers Engineering from Faculdade de Engenharia da Universidade do Porto, Portugal, and an MBA from the Vlerick Leuven Gent Management School, Belgium. After working in the telecommunications sector in Portugal for 5 years, he was employed by Toyota Motor Europe, in Belgium, where he currently supports the European national sales and marketing companies, vendors and internal users of the central warranty system, by analyzing, specifying and ensuring a soft roll-out of new system requirements.

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